REMARKS

Claims 1 – 4 have been rejected under 35 U.S.C. 103(a) as being unpatentable over Green et al. (263) in view of Nickens (931).

Independent Claims 1 and 3 have been amended to recite a parallel scrubber system for a semiconductor processing tool. The cited references fail to disclose or suggest such a system. New dependent Claims 5 – 20 have also been added for consideration.

CONCLUSION

In view of the amendments and remarks, it is believed that all claims are in condition for allowance, and it is respectfully requested that the application be passed to issue. If the Examiner feels that a telephone call would expedite the prosecution of this case, the Examiner is invited to call the undersigned at (508) 879-5700.

Respectfully submitted,

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MARKED UP VERSION OF AMENDMENTS

Claim Amendments Under 37 C.F.R. § 1.121(c)(1)(ii)

What is claimed is:

1. (Amended) A continuous-operation scrubber system[,] to remove contaminants in a gas in a semiconductor processing tool comprising:

a pair of channels connected in parallel to a supply line of a semiconductor processing tool;

a scrubber coupled with each channel [for removing] that removes a gas contaminant from each channel; and

a purge system coupled with each scrubber for purging the removed gas contaminant from the scrubber.

2. (Amended) The continuous-operation scrubber system of Claim 1 further comprising a control system for directing a flow of gas [among] through the channels.

3. (Amended) A method for continuously scrubbing a gas [sample] in a semiconductor processing tool comprising the steps of:

delivering a gas [sample] to a [multiple-]scrubber system for a semiconductor processing tool including a first scrubber and a second scrubber connected in parallel;

directing the gas [sample] through the first scrubber;

[directing the gas sample through the second scrubber;]

purging the first scrubber while directing the gas [sample] through the second scrubber; and

purging the second scrubber while directing the gas [sample] through the first scrubber.

4. (Amended) The method of Claim 3 wherein flow of the gas [sample] alternates between passing through the first scrubber and passing through the second scrubber.

Please add new Claims 5 – 20 as follows:

5. (New) The system of claim 1 wherein the purge system is coupled to at least one of the scrubbers for purging reversibly-bound basic nitrogen compounds from the scrubber.

6. (New) The system of claim 1 wherein at least one of the scrubbers includes a cation exchange medium.

7. (New) The system of claim 1 further comprising a flow controller that selectively controls which of the scrubbing channels the gas can flow through to a converter.

8. (New) The system of claim 7 wherein the flow controller is governed by a control system that is programmed to transfer the flow of a reference gas reaching a detector from a scrubbing channel with a contaminated scrubber to a scrubbing channel with a purged scrubber and to then direct a purge gas through the contaminated scrubber.

9. (New) The system of claim 8 wherein the control system is programmed to transfer the flow of the reference gas away from one of the scrubbing channels and to purge the scrubber of that scrubbing channel before a weak-base nitrogen compound can penetrate through the scrubber.

10. (New) The system of claim 9, wherein the control system is programmed to alternately transfer the flow of a gas between a primary channel, where the gas comprises a target gas, and one of the scrubbing channels, where the gas comprises a reference gas.

11. (New) The system of claim 1 further comprising a pressure reducer located between a detector and the scrubbers.

12. (New) The method of claim 3 further comprising the steps of:

passing a first reference gas through the first scrubber to remove basic nitrogen compounds from a first reference gas; and

passing a second reference gas through a second scrubber to remove basic nitrogen compounds from the second reference gas.

13. (New) The method of claim 3 further comprising purging the first scrubber to remove reversibly-bound basic nitrogen compounds while passing the second reference gas through the second scrubber.

14. (New) The method of claim 3 further comprising passing first and second reference gas through a converter which converts gaseous nitrogen compounds in the reference gas into an indicator gas after the reference gas are passed through their respective scrubbers.

15. (New) The method of claim 14 further comprising directly the first and second reference gas to a detector which detects a concentration of the indicator gas in the reference gas after the reference gas is passed through the converter.

16. (New) The method of claim 15 further comprising passing a target gas through the converter which converts gaseous nitrogen compounds in the target gas into the indicator gas; and

passing the target gas through the detector which detects the concentration of the indicator gas in the target gas after the target gas passes through the converter.

17. (New) The method of claim 16 further comprising determining a total basic-nitrogen-compound contamination concentration by comparing a detected

concentration of the indicator gas in the target gas with a detected concentration of the indicator gas in the reference gas.

18. (New) The method of claim 3 further comprising alternately detecting a concentration of an indicator gas in a reference gas flowing through the first scrubber and a concentration of the indicator gas in a reference gas flowing through the second scrubber.

19. (New) The method of claim 3 further comprising the step of alternately purging the first and second scrubbers while maintaining flow of the gas to a converter and to a detector.

20. (New) The method of claim 3 further comprising a detector and a processor connected to the detector.